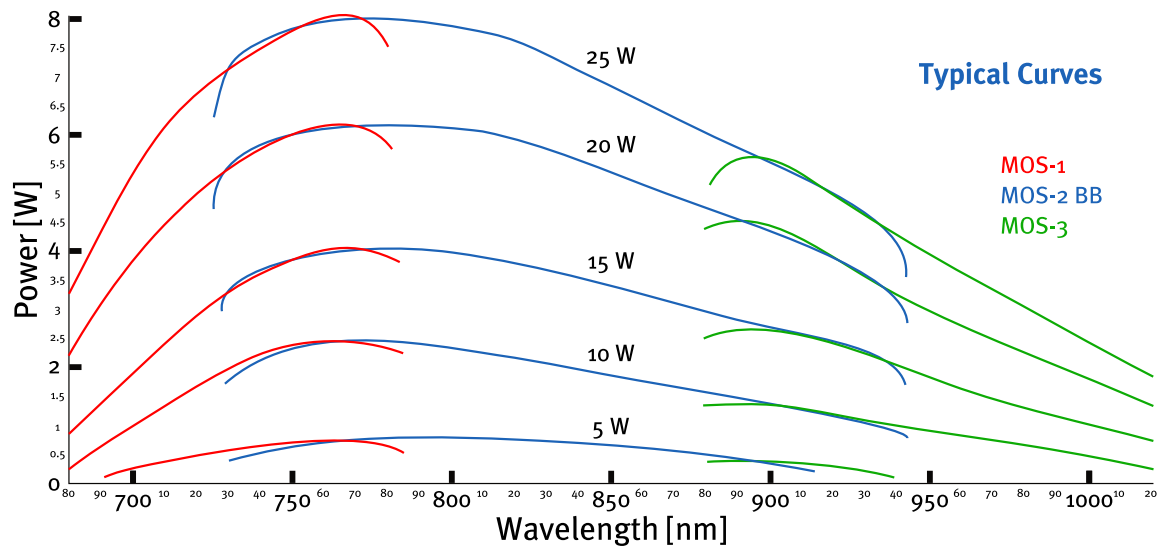


# Matisse 2 TR

## Passively Stabilized Titanium:Sapphire Ring Laser

- High power output up to 8.4 W
- Hands free operation with ELSA (Electronic Laser Self Alignment)
- Improved Housing: Faster Purge of Laser
- Intracavity EOM available
- Low Amplitude Noise: Quiet Laser Operation
- Extended scans over nanometers (requires wavemeter, optional fiber launch integrated in Matisse)
- Field serviceable: optics change, maintenance, upgrades, conversion to Matisse 2 DR (Dye)
- Extension modules available from 210-4200 nm
- Special optics for enlarged tuning range (662-1050 nm)

## Tuning Range



	Millennia eV 25W	Millennia eV 20W	Millennia eV 15W	Millennia eV 10W	Millennia eV 5W
Specified Power <sup>1)</sup>	7.2 W	5.5 W	3.8 W	2.0 W	0.8 W
	MOS-1	MOS-2 BB	MOS-3		
Three Optic Sets <sup>2) 3)</sup>	680-780 nm	730-930 nm	880-1020 nm		

## General Characteristics

Beam Radius <sup>4)</sup>	0.6-0.7 mm (typical)
Beam Divergence	< 1.2 mrad (half angle)
Linewidth	< 1 MHz rms / 100 msec, < 100 kHz rms / 100 μsec
Amplitude Noise	< 0.1 % rms (above pump noise, added in quadrature)
Scan Range <sup>1)</sup>	> 50 GHz
Beam Polarization	horizontal

## Requirements

Pump Laser <sup>5)</sup>	Millennia Series
Ambient Conditions	constant temperature in the 20-30 °C range, 80% max. rel. humidity, non condensing
Cooling	required for crystal (< 20 Watt)
Laboratory	vibrational isolated optical table, dust-free air (flow box)
Computer Control	Windows XP / Vista / 7 / 8 / 10, USB-Port

<sup>1)</sup> at approximately 780 nm

<sup>2)</sup> non-standard tuning ranges upon request

<sup>3)</sup> depending on pump power

<sup>4)</sup> at Matisse output port

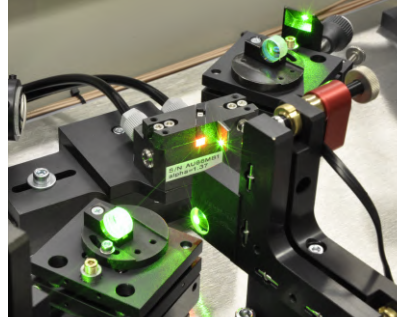
<sup>5)</sup> please contact Sirah for compatibility with other pump lasers

# Matisse 2 TR

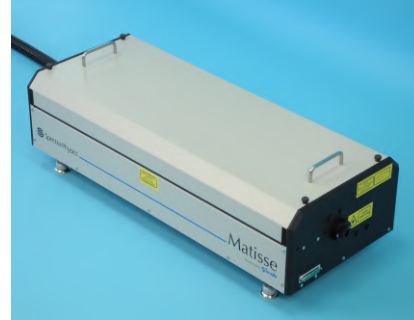
## Matisse 2 TR



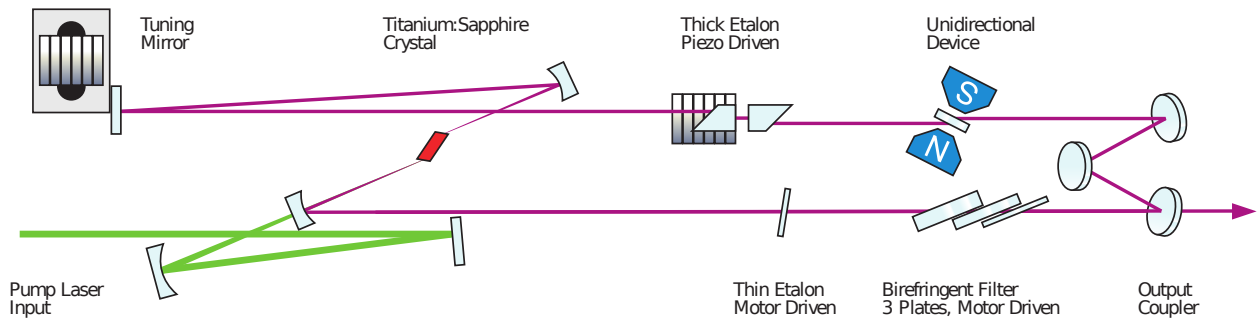
## ELSA



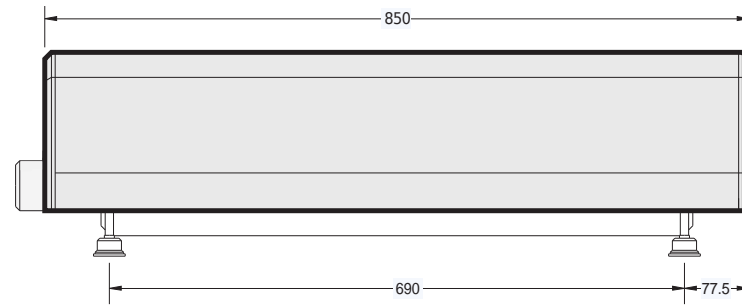
## Matisse 2 TR Setup



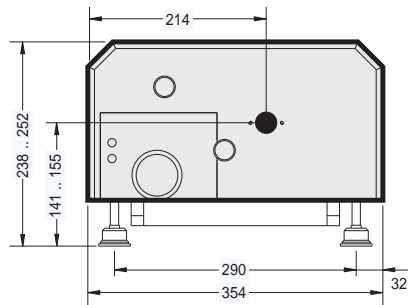
## Optical Layout



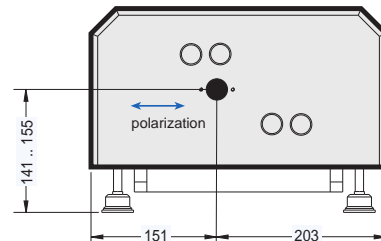
## Dimensions



Matisse 2 TR (side view)



Matisse 2 TR (pump laser input end)



Matisse 2 TR (Ti:Sa output end)

All Dimensions in mm  
 Specifications are subject to change without notice  
 U.S. Patent 7,489,715



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